

REMARKS

In the Official Action, claim 3 was rejected under 35 USC §112, as being indefinite. By this Amendment, claim 3 has been cancelled and therefore the rejection is moot.

Also in the Action, all of the claims, namely claims 1-9, were rejected under 35 USC §101 for various reasons. In response, claim 1 has been amended in two ways to overcome that rejection. Specifically, the method has been indicated as being "computer-implemented," and the use of the inventive method (for interactive simulations with complex vehicle models) has been added to claim 1. With these revisions, it is believed that the §101 rejection has been overcome.

On the merits, claims 1-3 were rejected under 35 USC §102 as being anticipated by the Schroeder et al. article. That rejection is respectfully traversed. In this regard, although the data structure disclosed in the Schroeder article and that of the present application are similar, the methods described are substantially different. In Schroeder et al., the method relates to the decimation of an existing, well-defined mesh. The data structure with vertex and neighboring information is given, and all associations are presumed to be valid.

In contrast, with the present invention, the object is to fix a poorly defined or "broken" mesh, not to simplify it. Many CAD/CAE tools provide a rough mesh with some incorrect conductivity information, such as duplicate vertices, poorly

aligned edges and the like. Thus, with the present invention, the duplicate vertices are removed without decimation of any non-duplicate vertices or other information.

In order to highlight the differences between the present invention and the Schroeder et al. article, claim 1 has been amended to bring out that the duplicate vertices are removed "without decimation of non-duplicate vertices." It is believed that claim 1 as amended clearly distinguishes from the subject matter of the Schroeder et al. article and that the rejection under §102 should be withdrawn.

Finally in the Official Action, the Examiner indicated that dependent claims 4-9 would be allowable if rewritten to overcome the other rejections and to include all the limitations of the base claim and intervening claims. The allowance of the subject matter of claims 4-9 is acknowledged and appreciated. However, in view of the above amendments to independent claim 1 and the remarks set forth herein, it is believed that all of original claims 1-2 and 4-9 are allowable.

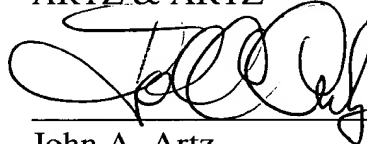
The Applicant is also submitting herewith new claims 10-12. Claim 10 is an independent claim that is similar to amended claim 1, but distinguishes its inventive subject matter in a slightly different manner. For example, claim 10 indicates that the inventive method is for "fixing holes in topographical information for a mesh." This is believed to fully distinguish the inventive subject matter from the Schroeder et al. article. Again, as indicated above, Schroeder et

al. relates to the decimation of an existing, well-defined mesh and the attempt to simplify it. The present invention in contrast attempts to fix poorly defined meshes, that is, meshes with "holes" in them. As a result, it is believed that new independent claim 10, together with claims 11 and 12 dependent therefrom, are allowable along with the claims discussed above.

In view of the foregoing, it is submitted that all of the claims remaining in the case, namely claims 1-2 and 4-12, are in proper form and patentably distinguish from the prior art. Accordingly, allowance of these claims and passage of the application to issuance are respectfully solicited.

Respectfully submitted,

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Dated: April 1, 2004